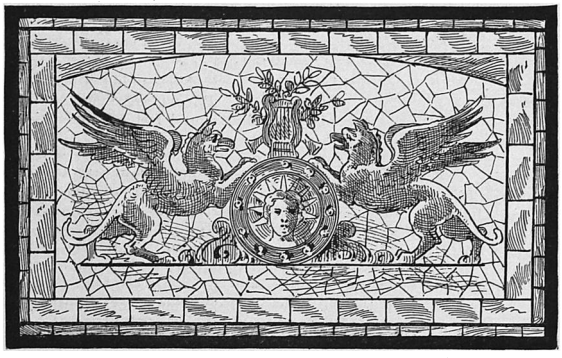

STAINED GLASS WINDOW, DESIGNED AND MADE BY SAMUEL WEST.

THE MINOR ARTS OF DECORATION.

VAST is the transition from the sun-dried vases of the ancient Egyptians, still manufactured as of yore on the banks of the Nile, to the exquisite productions now sent forth. Moldings rival in grace and beauty the best productions of sculpture, and approximate perfection has been attained in veinings, stainings, gilding and combination of hues, in enameling and in glazing effects. For enameling a bed in the plastic clay is scooped out, the prepared paste set in, and the whole fixed by firing.

Of the materials used in decorative ceramic-ware fire is the great transmuting agency. Even the preparation of gold applied by the brush is densely black when laid on, and after being fired needs burnishing for the development of its lustre. Colors of various pigments applied are wholly changed in the intense heat to which the ware is subjected.

For relief work ceramic paste is laid on the body of the article while yet plastic, and then manipulated with appropriate tests. White porcelain relief designs are very effective on a colored ground, the more so where portions of the relief are so thin that the colored ground shines through. With the sinking in of the glaze when fired, an etherial liquidity, subtle and delicious, is producible. A method of designs, combining high and low relief work, and incised work, other portions of the colored design being flush with the surface, is in forming vases and other articles with separate compositions charged with different colors, by means of an imbedding process, the design being executed by graving and modeling tools.

The enamels chiefly used are nitrate of bismuth, iron, uranium, nickel and cobalt, these being mixed with resin and oils. A distant approach to the appearance of the celebrated Hispano Moresco lustered ware, the secret of which has been lost, has been made by mixing chloride of gold with lavender, oil, sulphur, resin and other carburated ingredients, and laying the mixture in a thin film on the glaze which, on firing, takes a faint purple irridescent tone.

The following list presents a mixture of colors suitable for ceramic painting, these colors being fixed by form:

Pompadour red, rouge riche, violet de fer, carmelite, brown bitumen, brown four, brun jaune,—all which colors have an iron base, mixed with purples and carmines, fade in firing; mixed with blues, must be exaggerated or the blue will burn them out. Pompadour red and violet de fer mixed with carmines disappear in the firing. Jaune ivoire mixes in all proportions with these colors. Bleu ciel, bleu foncé, bleu outremer and vert bleu mix in all proportions with jaune clair, jaune foncé, orange, carmines, purples, vert chrome and clair. Jaune clair, jaune foncé and orange mix in all proportions with blues, vert chrome, foncé and clair, purples and carmines.

Etching on porcelain is effected by covering the surface of the article with a black varnish, through which the design is drawn by a sharp steel point down to the glaze. By the application of fluoric acid the glaze is dissolved away, and fine depressed lines result. The varnish is then removed and some strong color or gold is rubbed into the depressed lines. The piece is now refired in a kiln, by which the glaze is softened and the color or gold securely held.

When vitrifiable powder instead of prepared mixtures are employed for painting on ceramic ware, these powders are first put in water and the water allowed to evaporate; and when dry they are mixed with a few drops of vinegar that has been exposed to the atmosphere for a few days. On being brought into use they are thinned with the same. The mixtures are kept in china vessels.

The glass adornments, often combined with ceramic ware, are fixed during the process of cooling of the ceramic composition, the glass being fused for this purpose at the points of junction.

The mosaic art properly connects itself with ceramics, as composed of cemented vitrifiable materials. In this art is found a means of decorating walls and mantel surfaces. In its highest form it allows of the production of pictorial designs with fine contrastive effects. The Italians pre-eminently excel in it, and execute landscapes, fruit, animals, flowers and human and mythologic figures with wonderful minuteness and fidelity. For these designs are employed porcelain and glazed clay, marble, plain and colored, composite glass in colors, also coarse and fine glass threads. Metal is also occasionally put to account.

For gold effects gold leaf is laid between two thin sheets of glass, which are then fused; it is also applied to the surface of clay tessera and cubes. The materials are supplied in cakes, square pieces and rounded sticks.

One method of inlay is as follows: A shallow receptacle is filled with plaster and on this the design is traced. The tracing of the pattern is by means of a narrow chisel, pressed straight downwards, an operation termed stabbing; or running a sharp dented wheel along the lines, making over the indents with a slightly curved groove. The finger of the left hand guides the tools. Separate portions are scooped out of hues and forms to suit the design and the pieces inserted. The pieces inserted are broken off the cakes, sheets and rods, and sometimes altogether shaped by the hammer; the hammer and the curved chisel are the chief instruments used.

A cement often used is made by soaking isinglass in water till soft and then dissolving it in spirits by a gentle heat; next in two ounces of this mixture are dissolved ten grains of ammoniacum, to which is added half a drachm of mastic, dissolved in three drachms of rectified spirits. A new method of imitating mosaic work is in staining peculiarly fine clays with the required colors, subjecting them to immense pressure before firing, they being previously glazed with enamel colors.

Ornamental tiles form a very essential feature of interior decoration used as floorings, and taking the place of hearthstones, the better class enriching mantels, constituting relief friezes, and serving for panels of sideboards and cabinets. Fine clays are usually used, the colorings obtained being from metallic oxides. The forms are molded, the clay inserted in the mold, in which it is subjected to powerful pressure. The proportions of the oxides are varied to suit the tint. Chloride of gold, with tin and chloride of silver, produce a purple; carbonate and silicate of cobalt, a blue; copper or chrome, mixed with cobalt, for green, nickel and carbonate of zinc being added for a bronze green; uranium or the sulphide of iron, with antimony, for yellow; chloride of silver for carmine; iron and chrome, with potash, for pink; iron or manganese and soda for violet; iron, cobalt, iridium, platinum, titanium for gray; chromate of iron, ochre and manganese for brown; white clay, with five per cent tin oxide for white. Laid on with a brush, these are fused in the kiln, and sinking into the material, present a rich porcelain-like hue. They are finally glazed. Marble dust and water afford a good cement.

The art of bossing up, applied to the manufacture of silver articles in relief, such as statuettes, box mountings, panel centers, etc., is thus carried on: The design to be represented having been modelled, is cast in bronze, and a thin plate of silver is beaten over the surface of the cast design, completely enveloping and closing in upon it. The silver shell is then cut off in sections and the pieces soldered together. The interior is now filled with pitch and the finishing process executed, after which the pitch is melted out. The soldering of the parts is so skillfully done that the work presents the appearance of having been executed in solid silver.

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